

REMARKS

Claims 31-36 are added. Claims 31-36 are supported by, for example, Fig. 8 and accompanying text.

Claims 1, 2, 6, 7, 11-13, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bawendi et al., US Patent 6,501,091 (hereinafter “Bawendi”). Applicants respectfully traverse the rejection.

In the advisory action mailed February 6, 2007, the Examiner states “Applicant’s arguments that the prior art, Bawendi et al. . . . fails to teach that a wavelength converting material capable of emitting longer wavelength light disposed adjacent to a semiconductor light emitting device have been fully considered but they are not persuasive. Bawendi’s . . . Fig. 2 shows another embodiment, wherein the quantum dots (22) generating red light are disposed nearby the semiconductor light-emitting device (10). . . . Therefore, red quantum dots (22) disposed nearby the semiconductor light-emitting device (10) (see Fig. 2) are considered by the examiner as the wavelength converting material capable of emitting longer wavelength light (red) disposed adjacent to the semiconductor light emitting device (10).”

Claim 1 is amended to recite “the second fluorescent material layer is substantially free of the first wavelength converting material.” This amendment is supported by, for example, paragraph 27, which states “absorption by the red-emitting phosphor of light emitted by the green/yellow emitting phosphor may be reduced by separating the green/yellow phosphors and red phosphors into discrete regions,” paragraph 29, which states “in the device illustrated in Fig. 4, the green/yellow-emitting phosphor 5 and other phosphors 4 are deposited over LED 1 as discrete layers,” and Fig. 4.

Fig. 2 of Bawendi, cited by the examiner as teaching “red quantum dots (22) disposed nearby the semiconductor light-emitting device (10)” which “are considered by the examiner as the wavelength converting material capable of emitting longer wavelength light (red)

disposed adjacent to the semiconductor light emitting device (10),” does not satisfy claim 1’s requirement that “the second fluorescent material layer is substantially free of the first wavelength converting material.” As is clear from Fig. 2, red quantum dots 22 are mixed with green quantum dots 18 in a single layer. Bawendi fails to teach every element of claim 1, thus claim 1 is allowable over Bawendi.

Claims 2, 6, 7, 11-13, and 17 are allowable over Bawendi by virtue of their dependence on claim 1. In addition, regarding claim 6, Bawendi does not teach “the second fluorescent material layer is disposed on a plurality of discrete regions on the semiconductor light emitting device.” Regarding claims 12 and 13, Bawendi does not teach arranging first and second fluorescent material layers “to maximize a luminous equivalent of a combination of the first, second, and third light” as recited in claim 12 and “to maximize color rendering index of a combination of the first, second, and third light” as recited in claim 13. Claims 6, 12, and 13 are thus allowable over Bawendi for these additional reasons.

Claim 8 also appears to be rejected under 35 U.S.C. 103(a) as being unpatentable over Bawendi. Applicants respectfully traverse the rejection. The Examiner’s analysis of Bawendi relative to claim 8 adds nothing to the deficiencies of Bawendi with respect to claim 1, from which claim 8 depends. Claim 8 is thus allowable over Bawendi for at least the same reason claim 1 is allowable over Bawendi. Applicants are unsure whether claims 9 and 10 are rejected and over what references. Claims 9 and 10 are allowable by virtue of their dependence on claim 1.

Applicants thank the Examiner for allowing claims 18-27 and for indicating that claims 3-5 and 14-16 are allowable if amended into independent form.

In view of the above arguments, Applicants respectfully request allowance of all pending claims. Should the Examiner have any questions, the Examiner is invited to call the undersigned at (408) 382-0480.

Submitted Electronically

Respectfully submitted,

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